

EENS Job Risk Assessment

Name(s) of Risk Team Members: P. Vanier, G. Greene, J. Johnson, P. Carr & A. Piper (facilitators)	Point Value → Parameter ↓	1	2	3	4	5
	Frequency (B)	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift
Job Title: Working with Cryogenics Job Number or Job Identifier: EENS-JRA-004 JRA Date:	Severity (C)	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability
Job Description: General work with non-combustible cryogenic fluids and systems. Does not include liquid hydrogen or liquid oxygen.	Likelihood (D)	Extremely Unlikely	Unlikely	Possible	Probable	Multiple
Training and Procedure List (Optional):						
Approved by: Date: Rev. #: Draft						
Stressors (if applicable, please list all): N/A		Reason for Revision (if applicable): N/A			Comments: N/A	

				Before Additional Controls							After Additional Controls					
Job Step / Task	Hazard	Control(s)	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Control(s) Added to Reduce Risk	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	% Risk Reduction
General use of [cryogenic] Dewar's	Explosion from overpressure due to freeze-up of Dewar fittings/pressure relief valves	Training, cylinder warehouse support, equipment maintenance, Tier 1	N	1	3	3	2	18								

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				Before Additional Controls						After Additional Controls						
Job Step / Task	Hazard	Control(s)	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Control(s) Added to Reduce Risk	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	% Risk Reduction
Moving storage vessel (dewar) to/from location	Tipping	Plate/ramp, training, facility maintenance, Tier 1, assistance with movement over floor breaks, proper Dewar base designs	N	1	2	2	2	8								
	Overexertion injuries caused by excessive lifting, pushing, pulling, holding or carrying an object	Wheeled dewars, training, assistance with movement	N	1	2	3	2	12								
	Being struck by object due to pressure release	Vessel design/certification, equipment inspection, training, Tier 1	N	1	2	2	2	8								
Moving storage vessel (dewar) in elevator	Oxygen deficiency	Training, no persons in elevator, assistance with movement	N	1	2	5	2	20								
Connecting or disconnecting storage Dewar to cryostat OR Transferring cryogenic liquid from storage dewar to cryostat	Being struck by object due to pressure release	Vessel design/certification, equipment inspection, training, Tier 1	N	1	3	3	2	18								
	Contact with temperature extremes	Training, procedures, appropriate PPE	N	1	3	2	3	18								
	Oxygen deficiency	Training, posting, safety reviews	N	1	3	5	1	15								
Transferring cryogenic fluid to portable glass Dewar	Contact with temperature extremes	Training, procedures, appropriate PPE	N	1	3	2	3	18								
	Oxygen deficiency	Training, posting, safety reviews	N	1	3	5	1	15								

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Hand transfer of cryogenic fluid from portable dewar to system	Contact with temperature extremes	Training, procedures, appropriate PPE	N	1	3	2	4	24									
	Oxygen deficiency	Training, posting, safety reviews	N	1	3	5	1	15									
	Laceration due to breakage of glass thermos dewar	Training, appropriate PPE, wrapping Dewar with tape	N	1	3	1	3	9									
Operation of auto fill system	Oxygen deficiency due to system failure	Training, posting, safety reviews	N	1	4	5	2	40									
	Contact with temperature extremes	Training, procedures, appropriate PPE	N	1	3	2	4	24									
General use of [cryogenic] Dewar's	Explosion from over pressurization due to loss of system cooling	System design review, ESR, procedures, training	N	1	3	3	1	9									
Further Description of Controls Added to Reduce Risk:																	
*Risk:	0 to 20 Negligible	21 to 40 Acceptable	41 to 60 Moderate	61 to 80 Substantial	81 or greater Intolerable												